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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/748,118	12/27/2000	Dae Jin Myung	YHK-059	4164

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EXAMINER

AWAD, AMR A

ART UNIT	PAPER NUMBER
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2675

DATE MAILED: 07/23/2004

16

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/748,118

Applicant(s)

MYUNG, DAE JIN

Examiner

Amr Awad

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/12/2004 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5 and 13-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanazawa in view of Weber (US patent NO. 5,430,458) and Sasao et al. (US patent NO. 6,242,860; hereinafter referred to as Sasao).

As to independent claim 1, Kanazawa (FIG. 4) teaches a plasma display panel wherein address interval for selecting discharge cell is included and a display are, and a non-display area co-exist (claim 3, lines 49-63). Kanazawa teaches a common sustaining electrodes (X) formed in parallel to the scanning/sustaining electrodes (Y1-

YN) at each discharge cell (col. 4, lines 39-60). Kanazawa (figure 2) teaches at least two dummy electrodes (auxiliary electrodes 23a and 23b) (col. 4, lines 7-18).

Kanazawa does not expressly teach that the at least two dummy electrodes being provided at the non-display area, for supplying the non-display area with charged particles in address interval.

However, Webber (figures 6 and 11) teaches a plasma display panel that includes dummy electrodes at the non-display area (in Webber's device, the dummy pulses are supplied in the display and non-display area) (col. 6, line 57 through col. 7, line 20).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the teaching of Webber having dummy electrodes (lines) to be incorporated to Kanazawa's device so as motivated by Webber, to reduce the flickering of the display device (col. 4, lines 28-40).

Kanazawa does not expressly teach that the at least two dummy electrodes being provided at the non-display area outside an effective display part of the plasma display panel, for supplying the non-display area with charged particles in address interval.

However, Sasao teaches plasma addressed electro-optical display that includes a plurality of dummy electrodes (XD1, XD2, YD1 and YD2 in figure 4) provided in the non-display area (col. 4, lines 14-21).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the teaching of Sasao having dummy units

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outside the display area of the display panel, to be incorporated to Kanazawa's display panel so as motivated by Sasao, for lessening nonlinear properties in a peripheral edge region of the plasma display panel (col. 4, lines 18-20)

As to claim 2, Webber teaches that the address driver can be used as address driver and as a dummy driver (col. 7, lines 14-20).

As to claim 3, Webber teaches that the discharge cells are supplied with charged particles produced by the discharging between the dummy electrodes (col. 6, lines 49-63).

As to claim 4, Webber teaches, as can be seen in figure 1 that the dummy electrodes (lines) are formed parallel to the scanning/sustaining electrodes.

As to claim 5, having the common sustaining electrodes maintain ground potential is inherent (see Kanazawa, col. 5, lines 8-21).

As to claim 13, Kanazawa (figure 4) teaches address electrodes (13) perpendicular to the scanning/sustaining electrodes (Y electrodes) and common sustaining electrodes (X electrodes) (col. 4, lines 38-60).

As to claims 14-16, Webber teaches that the at least two dummy electrodes supply the non-display area with charged particles formed during an address interval, and wherein the non-display does not include any discharge cells (col. 6, line 57 through col. 7, line 20).

As to claim 17, it is obvious that the non-display area would be outside the display area because the display area is always in the middle of the display.

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As to claim 18, as can be seen above, Webber shows that the auxiliary discharge is formed by the at least two dummy electrodes in the non-display area.

As to claim 19, Webber shows that some of the dummy electrodes provided during a negative scanning pulse (col. 6, line 57 through col. 7, line 20 and figure 7) which fairly reads on claim 19,

As to claim 20, Sasao shows that the dummy electrode alternates forming pulses with the second dummy electrode (col. 4, lines 9-13).

4. Claims 6-12, 21-26-32 and 33-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen et al. (US patent NO. 6,181,305; hereinafter referred to as Nguyen) in view of Webber in view of Sasao.

As to independent claim 6, Nguyen (figure 1B) teaches a plasma display panel wherein an address interval for selecting discharge cells is included and a display area and non-display area co-exist (col. 4, lines 10-36). Nguyen (figures 4A-4C) teaches applying auxiliary pulse V_v and scanning pulse to the scanning/sustaining electrodes formed at the display area so that the scanning/sustaining electrodes can sequentially cause a second auxiliary discharge (col. 7, lines 11-47).

Nguyen does not expressly teach having a dummy electrode driver for applying dummy pulse to dummy electrodes such that the dummy electrodes formed at the non-display area can cause a first auxiliary discharge in the address interval.

However, Webber (figure 1) teaches a plasma display panel that includes dummy electrodes at the non-display area (in Webber's device, the dummy pulses are supplied

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in the display and non-display area) (col. 6, line 57 through col. 7, line 20). Webber teaches that the address driver can be used as address driver and as a dummy driver (col. 7, lines 14-20).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the teaching of Webber having dummy electrodes (lines) to be incorporated to Nguyen's device so as motivated by Webber, to reduce the flickering of the display device (col. 4, lines 28-40).

Nguyen does not teach that dummy electrodes are formed outside effective display part of the plasma display panel.

However, Sasao teaches plasma addressed electro-optical display that includes a plurality of dummy electrodes (XD1, XD2, YD1 and YD2 in figure 4) provided in the non-display area (col. 4, lines 14-21).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the teaching of Sasao having dummy units outside the display area of the display panel, to be incorporated to Kanazawa's display panel so as motivated by Sasao, for lessening nonlinear properties in a peripheral edge region of the plasma display panel (col. 4, lines 18-20)

As to claim 7, Webber teaches that the discharge cells are supplied with charged particles produced by the discharging between the dummy electrodes (col. 6, lines 49-63).

As to claim 8, Nguyen shows in figures 4A-4C that the auxiliary pulse is positive, and Nguyen shows in figure 3 that the scanning pulse is negative (col. 6, lines 12-63).

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As to independent claim 9, the claim is a method claim corresponds to apparatus of claim 6 and would be analyzed as previously discussed with respect to claim 6.

As to claim 10, as can be seen above, Nguyen teaches all the limitation of claim 10 except the citation of an auxiliary pulse to the scanning/sustaining electrodes to produce charged particles within the discharge cells in the address interval.

However, Webber (figure 1) teaches a plasma display panel that includes dummy electrodes at the non-display area (in Webber's device, the dummy pulses are supplied in the display and non-display area) (col. 6, line 57 through col. 7, line 20).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the teaching of Webber having dummy electrodes (lines) to be incorporated to Nguyen's device so as motivated by Webber, to reduce the flickering of the display device (col. 4, lines 28-40).

As to claim 11, as can be seen from figure 3 of Nguyen, the scanning pulses are negative, and the auxiliary pulses of Webber (figure 6) are positive.

As to independent claim 12, the claim is substantially similar to the apparatus of claim 6 and would be analyzed as previously discussed with respect to claim 6 above.

As to claims, 21-26, these claims are similar to claims 14-19 which are rejected above in view of Webber, and would be analyzed as previously discussed with respect to claims 14-19.

As to claim 27, Sasao shows that the dummy electrode alternates forming pulses with the second dummy electrode (col. 4, lines 9-13).

As to claim 28, Sasao shows that the dummy electrode alternates forming pulses with the second dummy electrode (col. 4, lines 9-13).

As to claims 29-30, figure 4 of Sasao's device fairly reads on the priming charge of the auxiliary electrodes YD1 and YD2, and auxiliary discharge in a non-display area.

As to claims 31 and 33-35, the limitations in claims 31 and 34 are similar and included in the limitations included in claims 14-19 and would be analyzed as previously discussed with respect to those claims.

As to claim 32, Sasao shows that the dummy electrode alternates forming pulses with the second dummy electrode (col. 4, lines 9-13).

As to claims 36-38, the claims are similar to claims 6-8 respectfully and would be analyzed as previously discussed with respect to claims 6-8.

Response to Arguments

5. Applicant's arguments with respect to claims 1-38 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Odake (US patent NO. 6,166,711) teaches a plasma display panel with dummy electrodes formed on the outermost electrodes of the circuit boards.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amr Awad whose telephone number is (703)308-8485. The examiner can normally be reached on Monday through Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on (703)305-4713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Amr Awad

7-20-2004

A.A.